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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,321	05/24/2001	Volkmar Heuer	Q64387	1370

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EXAMINER

PHAN, TRI H

ART UNIT PAPER NUMBER

2661

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/863,321	Applicant(s) HEUER, VOLKMAR	
	Examiner Tri H. Phan	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-3 and 5-10 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Arguments

1. This Office Action is in response to the Response/Amendment filed on August 25th, 2005. Claims 1-10 are now pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by **Wakim et al.** (U.S.6,477,178; hereinafter refer as '**Wakim**').

- In regard to claim 1, **Wakim** discloses in Figs. 1-2 and in the respective portions of the specification about the system and method for *transmitting, via the a synchronous digital transport network, frame-structured synchronous multiplex signal, composed of frames having the payload section and the overhead section, wherein the payload section comprises multiplex units that are multiplexed according the multiplex hierarchy* (For example see Figs. 1-2; Abstract; col.7, lines 30-42; col. 8, lines 19-35), *wherein the method comprises transmitting the*

Art Unit: 2661

frame of the frame-structured synchronous multiplex signal to be transmitted, including its unchanged overhead section, as payload in the concatenation of newly formed multiplex units (“without terminating the synchronous path or associated overhead portions of the synchronous payload envelops ‘SPE’s”); For example see Figs. 1-2; col. 4, lines 55-61; col. 14, lines 6-8).

- Regarding claim 2, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **Wakim** further discloses, *wherein the method further comprises creating a number of new multiplex units of the same size, and concatenating these new multiplex units form the virtual concatenation, packing the frame, including the overhead section thereof, in payload sections of the concatenated new multiplex units, creating the new frame and embedding the concatenated new multiplex units in the payload section and transmitting the new frame via the synchronous transport network* (For example see Figs. 1-2; col. 7, lines 30-42; col. 8, lines 19-35).

- In regard to claim 3, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **Wakim** further discloses, *wherein the synchronous transport network is the SDH network, wherein the frames are synchronous transport modules of the type STM-N where $N = 1, 4, 16$ or 64 , and wherein the multiplex units are virtual containers of the type VC-N where $N = 11, 12, 2, 3$, or 4 or contiguously concatenated virtual containers of the type VC-4-Nc where $N = 4$ or 16 , and wherein the newly formed multiplex units are virtual containers of the type VC-N where $N = 3$ or 4* (For example see col. 7, lines 30-42; col. 8, lines 19-35; col. 14, lines 6-8).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wakim et al.** (U.S.6,477,178; hereinafter refer as '**Wakim**').

- In regard to claims 5-8, in addition to features in base claim 1 (see rationales pertaining the rejection of base claim 1 discussed above), **Wakim** discloses all the subject matter of the claimed invention as discussed in **part 4** above in this Office action, including the system and method for trafficking telecommunication signals having various formats, by mapping the synchronous payload envelope into the transport signal without terminating the synchronous path or associated overhead portion of the synchronous payload envelope. **Wakim** does disclose about the different level of signals mapping (For example see col. 8, lines 19-35; col. 14, lines 3-13), but fails to explicitly disclose about specific rates mapping on specific system such as "*STM-N, OC-N or OC-3-Nc into M virtually concatenated virtual containers of the type VC-4 or VC-3*". However, it is obvious that, depending on the data frame rates of the specific system, the data frames are mapped into the nearest available SDH virtual container rates; therefore, the

Art Unit: 2661

specific type and number of virtually concatenated virtual containers are decided on system by system, as matter of choices.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to provide specific type and number of virtually concatenated virtual containers for the specific system, which bases on the data rate as matter of choices.

6. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Martin et al.** (EP 0874488 A2; hereinafter refer as '**Martin**') in view of **Wakim et al.** (U.S.6,477,178):

- In regard to claim 9, **Martin** discloses in Figs. 1-6 and in the respective portions of the specification about the *multiplexer for a synchronous digital transport network* ('transparent multiplexer/demultiplexer of the SONET transport node'; For example see Fig. 6; Abstract), *comprising at least one tributary input* ('trib input ports') *for receiving the first frame-structured synchronous multiplex signal* ('OC-48') *comprising first frames each having a payload section and an overhead section* (Fig. 1), *wherein the payload section comprises multiplex units that are multiplexed according to a multiplex hierarchy* (For example see Fig. 6; page 7, lines 19-27), *a multiplex device* ('STS-1 manager'; see Fig. 6) *connected to the tributary input, for creating new multiplex units* ('STS-N') *for concatenating the newly formed multiplex units to form a concatenation* ('STS-Nc'; For example see page 3, lines 44-54) *and at least one output* ('SC output port') *for creating and transmitting a second, frame-structured synchronous multiplex signal comprising second frames in whose payload sections the concatenated, newly formed multiplex units are inserted* ('supercarrier STS-192'; For example see Fig. 6; page 10, lines 29-

Art Unit: 2661

32). **Martin** does disclose wherein the SC TOHP processor creates the SC TOH for the supercarrier STS-192 from the signals received from the Trib TOH, e.g. leaves the overhead section of the STS-N unchanged (For example see Fig. 6; page 9, line 37 through page 11, line 3), but fails to explicitly disclose wherein the packing frame *“including the unchanged overhead sections, as payload in the concatenation of the newly formed multiplex units”*). However, such implementation is known in the art.

For example, **Wakim** discloses in Figs. 1-2 and in the respective portions of the specification about the system and method for trafficking telecommunication signals having various formats, by using the matrix (*“multiplex device”*) for mapping the synchronous payload envelope into the transport signal (*“wherein the payload section comprises multiplex units that are multiplexed according to a multiplex hierarchy”*; see col. 7, lines 30-42; col. 8, lines 19-35; wherein the VC-3s are mapping into STM-4 in a multiplex hierarchy level) without terminating the synchronous path or associated overhead portion of the synchronous payload envelope (*“including the unchanged overhead section, as payload in the concatenation of the newly formed multiplex units”*; For example see Figs. 1-2; Abstract; col. 4, lines 55-61; col. 14, lines 6-8). **Wakim** also disclose about the different level of signals mapping (For example see col. 8, lines 19-35; col. 14, lines 3-13).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the matrix’s mapping as taught by **Wakim** into the **Martin**’s multiplexer, with the motivation being to reduce system cost and ensure signal integrity as disclosed in **Wakim**: col. 2, lines 16-22.

- Regarding claim 10, **Martin** further discloses, *the multiplexer further comprising a switching matrix ('Tmux'; For example see Fig. 6; page 7, lines 19-27) for selectively switching of multiplex units, wherein the multiplex device ('STS-1 manager') is connected to a matrix input ('Trib input port') and the output is connected a matrix output ('SC output port').*

Response to Amendment/Arguments

7. Applicant's arguments filed on August 25th, 2005 have been fully considered but they are not persuasive.

In regarding to claims 1 and 9, Applicant mainly argues that **Wakim** fails to disclose, *"wherein the payload section comprises multiplex units that are multiplexed according to a multiplex hierarchy"*. Examiner respectfully disagrees. **Wakim** does disclose about the method for mapping from a particular level SPE such as STS-1 SPE, VC-3; into a particular level transport signal such as OC-12, STM-4, by using the matrix 34, 134 in figure 1; e.g. *"multiplex device"*, for mapping the synchronous payload envelope into the transport signal; wherein, VC-3s, e.g. *"multiplex units"*, are multiplex in the hierarchy level of TU-3, TUG-3, VC-4, into STM-4 signal as disclosed in col. 7, lines 30-42; col. 8, lines 19-35. Therefore, Examiner concludes that **Wakim** teaches the arguable features.

Applicant also argues that **Wakim** fails to disclose, *"transmitting the frame of the frame-structured synchronous multiplex signal to be transmitted, including its unchanged overhead section, as payload in the concatenation of newly formed multiplex units"*. Examiner respectfully disagrees. **Wakim** does disclose about the method for mapping the synchronous payload envelope into a transport signal, e.g. *"the frame of the frame-structured synchronous multiplex*

Art Unit: 2661

signal", for transporting over the network without terminating the synchronous path or associated overhead portion of the synchronous payload envelope, i.e. "*including its unchanged overhead section*", as disclosed in Abstract). Therefore, Examiner concludes that **Wakim** teaches the arguable features.

Claims 2-8 and 10 are rejected as in Part 3, 5 and 6 above of this Office action and by virtue of their dependence from claims 1 and 9.

Allowable Subject Matter

8. Claim 4 is objected to as being dependent upon a rejected base claim (claim 1), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2661

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272-3126.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2661

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tri H. Phan
December 14, 2005



BRIAN NGUYEN
PRIMARY EXAMINER